IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No:	10/715,744
Applicant:	Gota ASANO
Filed:	November 18, 2003
Title:	ALKALINE STORAGE BATTERY AND METHOD
TC/A.U.:	1795
Examiner:	Tracy Mae Dove
Confirmation No.:	5520
Notice of Appeal Filed:	October 19, 2007
Docket No.:	MAT-8484US

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Advisory Action dated October 11, 2007, and further the Notice of Appeal filed October 19, 2007, Appellant is submitting this Appeal Brief for the above-identified application.

I. REAL PARTY IN INTEREST

The Real Party In Interest in this matter is Matsushita Electric Industrial Co., Ltd.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to Appellant, Appellant's legal representative, or Appellant's Assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-10 are pending in the application. Claims 1-8 are rejected and are on appeal. Claims 9 and 10 are withdrawn from consideration as drawn to an nonelected invention and are not on appeal.

IV. STATUS OF AMENDMENTS

There are no pending, unentered amendments after a Final Rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates to alkaline storage batteries and to a method for manufacturing the batteries. Specification, page 1, lines 3-7. Claims 1-8, drawn to an alkaline storage battery, are on appeal.

Claim 1, the only independent claim on appeal, recites "an alkaline storage battery." Corrected Figure 1(a) is a longitudinal sectional view showing the structure of an example of the alkaline storage battery. Corrected Figure 1(a) and specification, page 7, lines 27-28, and page 8, lines 22-26. Figure 1(b) is a cross-sectional view of the example of the alkaline storage battery. Figure 1(b) and specification, page 7, lines 5-8. The reference numbers given below refer to Corrected Figure 1(a) unless otherwise indicated.

The battery comprises cylindrical metal case **6** having a bottom. Specification, page 9, lines 10-16. Positive plate **3** and negative plate **4** are spirally wound with separator **5** interposed between them within cylindrical metal case **6**. Corrected Figure 1(a), Figure 1(b), specification, page 9, lines 3-7. Separator **5** has insulating properties.

Specification, page 9, lines 4-5, and page 13, lines 3-4. Positive plate **3** has protrusion **15** projecting out of the positive plate. Specification, page 9, lines 17-20. Negative plate **4** has protrusion **16** projecting out of the negative plate. Specification, page 9, lines 7 -10 and 14-15.

The battery additionally comprises: An upper metal current collector **1** for collecting current from the positive electrode side. Specification, page 4, lines 12-13. A bottom metal current collector **7** for collecting current from the negative electrode side. Specification, page 9, lines 9-10 and 14-16. An electrolyte. Specification, page 9, lines 22-23, and page 13, line 21. A sealing plate **2** made of metal with a hole formed at the center. Specification page 9, lines 22-27.

Electrode group **22** is formed by spirally winding positive plate **3** and negative plate **4** with separator **5** interposed between them. Specification, page 4, lines 16-19; page 6, lines 11-19; page 9, lines 3-7; and Figure 1(b). Protrusion **15** of positive plate **3** and protrusion **16** of the negative plate **4** face mutually opposite directions. Specification, page 4, lines 19; page 6, lines 11-16; and Figure 1(a). Electrode group **22** is housed in metal case **6** after joining protrusion **16** of negative plate **4** with bottom metal current collector **7**. Specification, page 4, lines 21-24. Bottom metal current collector **7** and the bottom of metal case **6** are joined. Specification, page 4, lines 23-24; and page 6, lines 25-28.

Upper metal current collector **1** has positive terminal **13** disposed through the hole in the center of sealing plate **2**, and upper metal current collector **1** and sealing plate **2** are joined. Specification, page 9, lines 24-29. The periphery of sealing plate **2** is

hermetically sealed with gasket **9** at an upper opening of metal case **6**. Specification, page 10, lines 2-5.

Withdrawn independent claim 9, which is not under appeal, recites a method for manufacturing an alkaline storage battery. Specification, page 6, line 9, to page 7, line 14.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following rejections are to be reviewed on appeal:

a) The rejection of claims 1-8 under 35 USC 103(a) as unpatentable over Yoshinaka, U.S. Patent 6,596,434 ("Yoshinaka") in view of the admitted prior art.

b) The rejection of claims 1-6 and claim 8 under 35 USC 103(a) as unpatentable over Han, U.S. 5,837,396 ("Han") in view of the admitted prior art.

VII. ARGUMENT

A. The rejection of claims 1-8 under 35 USC 103(a) as unpatentable over Yoshinaka in view of the admitted prior art

Claims 1-8 were rejected as unpatentable over Yoshinaka, U.S. Patent 6,596,434 ("Yoshinaka") in view of the admitted prior art. The admitted prior art is Appellant's Figures 4a and 4b, as well as the relevant description of Figures 4a and 4b in the specification. These figures show a conventional alkaline storage battery. Specification, page 1, lines 19-20.

1. The Examiner has not made the prima facie case

As disclosed in the specification, a conventional alkaline storage battery, the admitted prior art, does not have metal current collector **1** having a cap-shaped terminal and doughnut-like sealing plate **2**. Specification, page 10, line 24, to page 11, line 3. The Examiner admits that Yoshinaka does not explicitly teach a terminal of the upper collector is disposed through a hole in the center of the sealing plate. Office action of 07/26/2007[1], page 3, lines 4-5.

With regard to the rest of the structures in the battery, the Examiner asserts that "other elements of the claimed invention not specifically disclosed by Yoshinaka, Figures 4a and 4b in the present specification are admitted prior art." Office action of 07/26/2007, page 3, lines 12-16. This assertion is incorrect.

In Yoshinaka, Figure 1, positive plate **6** is electrically connected to filter **1** by lead tab **9**. Yoshinaka, Figure 1, and column 1, lines 22-33. A similar structure is shown in Figure 4(a) of the instant application, the admitted prior art, in which lead **11** electrically connects upper metal current collector **18** and sealing plate **17**. Specification, page 10, line 28, to page 11, line 5, and Figure 4(a). In appellant's invention, positive plate **1** is directly joined to upper metal current collector **13** by protrusion **15**, which reduces resistance and which also allows the electrode area, and consequently, the battery capacity, to be increased. Specification, page 5, line 29, to page 6, line 8.

In the specification, appellant specifically pointed out that the invention differs from

[1]Appellant's copy of the Final Rejection bears a Mailing Date of 07/26/2007. The copy of the Final Rejection in Patent Office's electronic files bears a mailing date of 07/10/2007. In the Advisory Action, the Examiner refers to the "Final Rejection of 7/10/07."

from a conventional alkaline storage battery in this respect. Specification, page 10, line 28, to page 11, line 5, specifically page 11, lines 2-3. Consequently, the Examiner's assertion that the other elements of the invention not shown by Yoshinaka are admitted prior art is incorrect.

The Examiner has not made the *prima facie* case. Combination of the applied references in the manner proposed by the Examiner does not produce appellant's invention because the following features are missing from the combination:

1) a protrusion, electrically connecting the positive plate and the upper metal current collector; and

2) a terminal of the upper collector disposed through a hole in the center of the sealing plate.

Because the Examiner has not made the *prima facie* case, the rejection of claims 1-8 under 35 USC 103(a) as unpatentable over Yoshinaka in view of the admitted prior art should be reversed.

2. The rejection relies on a conclusory statement, unsupported by any articulated reasoning

To provide the terminal of the upper collector disposed through a hole in the center of the sealing plate, an admittedly missing element of appellant's invention, the Examiner asserts:

> [T]he invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one of

> skill would have found the two piece terminal and sealing plate as shown in Figure 1 of the present invention obvious in view of the single piece terminal and sealing plate as shown in Figures 1-5 of Yoshinaka. The battery cap assembly of the claimed invention and the battery cap assembly of Yoshinaka are obvious variants and one of skill would reasonably expect them to function the same.
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> Office action of 07/26/2007, page 3, lines 5-11 (emphasis added).

The Examiner's conclusion of obviousness is a conclusory statement that does not detail or analyze the facts upon which it is based. No analysis of the structure shown in Figures 1-5 of Yoshinaka is provided. No explanation, reasoning and/or evidence is given as to why the person of ordinary skill in the art would envision the features of appellant's invention from the teachings of Yoshinaka, which the Examiner admits does not disclose them. Office action of 07/26/2007, page 3, lines 4-5. No discussion of the inferences and creative steps that a person of ordinary skill in the art would employ to arrive at the claimed invention was given. The only support offered for the assertion that this feature of appellant's invention is an obvious variant of Yoshinaka is the unsupported assertion that "one of skill would reasonably expect them to function the same."

The person of ordinary skill in the art might be able to determine whether or not the structures contained in appellant's invention, once envisioned, would function in the same manner as those of Yoshinaka. But, to make this determination, the person of ordinary skill in the art must have knowledge of the invention. Consequently, the Examiner's assertion does not explain how or why one of ordinary skill in the art would envision these features in the first place. For this reason, the Examiner's assertion that

appellant's invention is an obvious variant of the disclosures of Yoshinaka is a conclusory statement, unsupported by any explicit analysis.

To facilitate review, analysis leading to conclusion of obviousness should be made explicit. *KSR International Co v. Teleflex Inc.*, 530 U.S. --, --, 82 USPQ2d 1385, 1396 (2007), *see* also *In re Lee*, 61 USPQ2d 1430, 1432-34 (Fed. Cir. 2002) (agency findings must be supported by the record). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 78 USPQ 1329, 1336 (Fed. Cir. 2006) (emphasis added). Further, to "imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W.*L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (emphasis added).

The Examiner has provided no other support or justification for the assertion that some of the missing features of the appellant's invention are "obvious variants" of Yoshinaka. The only rational offered, that the person of ordinary skill in the art would reasonably expect features of Yoshinaka and features of appellant's invention "to function the same", depends on appellant's disclosure for knowledge of these features.

The rejection relies on a conclusory statement, unsupported by any articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, and depends on appellant's disclosure. Even if, for the sale of argument, the Examiner's

the Examiner's assertion were correct, the Examiner has still not made the *prima facie* case, because the assertion only addresses some, but not all of the features missing from the combination. The Examiner has not alleged that a protrusion, electrically connecting the positive plate and the upper metal current collector, is an obvious variant of either Yoshinaka or the admitted prior art. For these additional reasons, the rejection of claims 1-8 as unpatentable over Yoshinaka in view of the admitted prior art should be reversed.

B. The rejection of claims 1-6 and 8 under 35 USC 103(a) as unpatentable over Han and the admitted prior art

Claims 1-6 and claim 8 were rejected as unpatentable over the combination of Han, U.S. 5,837,396 ("Han"), and the admitted prior art. The admitted prior art is Figures 4a and 4b, as well as the relevant description of Figures 4a and 4b in the specification. These figures show a conventional alkaline storage battery. Specification, page 1, lines 19-20.

1. The Examiner has not made the prima facie case

As disclosed in the specification, a conventional alkaline storage battery, the admitted prior art, does not have metal current collector **1** having a cap-shaped terminal and doughnut-like sealing plate **2**. Specification, page 10, line 24, to page 11, line 3. The Examiner admits that Han does not explicitly teach a terminal of the upper collector is disposed through a hole in the center of the sealing plate. Office action of 07/26/2007, page 4, lines 4-5.

With regard to the rest of the structures in the battery, the Examiner asserts that "other elements of the claimed invention not specifically disclosed by Han, Figures 4a and

4b in the present specification are admitted prior art." Office action of 07/26/2007, page 4, lines 11-13. This assertion is incorrect.

In Han, Figure 2, cylindrically wound laminate **8**, comprising positive electrode plate **10**, negative electrode plate **12**, and separator means **14** is electrically connected to an unnumbered structure by an unnumbered lead wire. Han, Figure 2, and column 2, line 66, to column 3, line 7. A similar structure is shown in Figure 4(a) of the instant application, the admitted prior art, in which lead **11** electrically connects upper metal current collector **18** and sealing plate **17**. Specification, page 10, line 28, to page 11, line 5, and Figure 4(a). In appellant's invention, positive plate **1** is directly joined to upper metal current collector **13** by protrusion **15**, which reduces resistance and which also allows the electrode area, and consequently, the battery capacity, to be increased. Specification, page 5, line 29, to page 6, line 8.

In the specification, appellant specifically pointed out that the invention differs from a conventional alkaline storage battery in this respect. Specification, page 10, line 28, to page 11, line 5, specifically page 11, lines 2-3. Consequently, the Examiner's assertion that the other elements of the invention not shown by Han are admitted prior art is incorrect.

The Examiner has not made the *prima facie* case. Combination of the applied references in the manner proposed by the Examiner does not produce appellant's invention because the following features are missing from the combination:

1) a protrusion, electrically connecting the positive plate and the upper metal current collector; and

2) a terminal of the upper collector disposed through a hole in the center of the sealing plate.

Because the Examiner has not made the *prima facie* case, the rejection of claims 1-6 and 8 under 35 USC 103(a) as unpatentable over Han in view of the admitted prior art should be reversed.

2. The rejection is a conclusory statement, unsupported by any articulated reasoning

To provide the terminal of the upper collector disposed through a hole in the center of the sealing plate, an admittedly missing element of appellant's invention, the Examiner asserts:

> [T]he invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because one of skill would have found the two piece terminal and sealing plate as shown in Figure 1 of the present invention obvious in view of the single piece terminal and sealing plate as shown in Figure 2 of Han. The battery cap assembly of the claimed invention and the battery cap assembly of Han are obvious variants and one of skill would reasonably expect them to function the same.
>
> Office action of 07/26/2007, page 4, lines 5-10 (emphasis added).

The Examiner's conclusion of obviousness is a conclusory statement that does not detail or analyze the facts upon which it is based. No analysis of the structure shown in Figure 2 of Han is provided. No explanation, reasoning and/or evidence is given as to why

why the person of ordinary skill in the art would envision the features of appellant's invention from the teachings of Han, which the Examiner admits does not disclose them. Office action of 07/26/2007, page 4, line 4-5. No discussion of the inferences and creative steps that a person of ordinary skill in the art would employ to arrive at the claimed invention was given. The only support offered for the assertion that appellant's invention is an obvious variant of Han is the unsupported assertion that "one of skill would reasonably expect them to function the same."

The person of ordinary skill in the art might be able to determine whether or not the structures contained in appellant's invention, once envisioned, would function in the same manner as those of Han. But, to make this determination, the person of ordinary skill in the art must have knowledge of the invention. Consequently, the Examiner's assertion does not explain how or why one of ordinary skill in the art would envision these features in the first place. For this reason, the Examiner's assertion that appellant's invention is an obvious variant of the disclosures of Han is a conclusory statement, unsupported by any explicit analysis.

To facilitate review, analysis leading to conclusion of obviousness should be made explicit. *KSR International Co v. Teleflex Inc.*, 530 U.S. --, --, 82 USPQ2d 1385, 1396 (2007), *see* also *In re Lee*, 61 USPQ2d 1430, 1432-34 (Fed. Cir. 2002) (agency findings must be supported by the record). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 78 USPQ 1329, 1336 (Fed. Cir. 2006) (emphasis added). Further, to "imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art

when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W.*L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (emphasis added).

The Examiner has provided no other support or justification for the assertion that some of missing features of the appellant's invention are "obvious variants" of Han. The only rational offered, that the person of ordinary skill in the art would reasonably expect features of Han and features of appellant's invention "to function the same", depends on appellant's disclosure for knowledge of these features.

The rejection relies on a conclusory statement, unsupported by any articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, and depends on appellant's disclosure. Even if, for the sale of argument, the Examiner's assertion were correct, the Examiner has still not made the *prima facie* case, because the assertion only addresses some, but not all of the features missing from the combination. The Examiner has not alleged that a protrusion, electrically connecting the positive plate and the upper metal current collector, is an obvious variant of either Han or the admitted prior art. For these additional reasons, the rejection of claims 1-6 and 8 as unpatentable over Han in view of the admitted prior art should be reversed.

C. Response to the Examiner's "Response to Arguments"

The Examiner cites *In re McLaughlin*, 170 USPQ 209 (CCPA 1971), for the proposition that any judgment of obviousness is based on hindsight, but as long as it take into account that was within the level of ordinary skill at the time the invention was made

made and does not include knowledge gleaned from applicants' disclosure, such a rejection is proper. Office action of 07/26/2007, page 4, line 17, to page 5, line 2.

The Examiner again admits that neither Yoshinaka nor Han teaches "a terminal of the upper collector is disposed through a hole in the center of the sealing plate." Office action of 07/26/2007, page 5, lines 3-4, and lines 20-21. That is, the Examiner admits that no reference of record discloses these features of appellant's invention. Consequently, this knowledge is gleaned from appellant's disclosure, and, because this knowledge is gleaned from appellant's disclosure, *McLaughlin* does not apply. The relevant case is *Gore*, 220 USPQ at 312-313 (improper to use what only the inventor taught in a rejection).

The Examiner also states that the section of the specification relied on "is *admitted prior art*." Office action of 07/26/2007, page 5, lines 2-3 and lines 18-19 (emphasis original). Where the specification identifies work done by another as "prior art," the subject matter so identified is treated as admitted prior art. *In re Nomiya*, 184 USPQ 607, 611 (CCPA 1975); MPEP 2129 (II). However, in the instant situation, the admitted prior art is only Figures 4a and 4b, as well as the relevant description of Figures 4a and 4b in the specification. It does not extend to the remainder of the specification. What the Examiner fails to appreciate is that:

1) A protrusion, electrically connecting the positive plate and the upper metal current collector is not admitted prior art. Specification, page 10, lines 28, to page 6.

2) Because no reference of record taught the two piece terminal and sealing plate as shown in Figure 1 of the present invention, these features of the rejection have been gleaned from appellant's disclosure.

The Examiner repeats the conclusory statements that one having ordinary skill in the art at the time the invention was made because one of skill would have found the two piece terminal and sealing plate as shown in Figure 1 of the present invention obvious in view of the single piece terminal and sealing plate as shown in Figures 1-5 of Yoshinaka and as shown in Figure 2 of Han. Office action of 07/26/2007, page 5, lines 5-8, and page 5, line 20, to page 6, line 1. The Examiner again attempts to support these conclusory statements by asserting the one of skill would reasonably expect them to function the same. Office action of 07/26/2007, page 5, lines 8-10, and page 6, lines 2-4.

The Examiner's argument relies on circular reasoning:

1) Because the missing features are obvious variants of Yoshinana and of Han, the person of ordinary skill in the art would expect them to function the same as the features of Yoshinana and of Han.

2) Because the person of ordinary skill in the art would expect the missing features to function the same as the features of Yoshinana and of Han, they are obvious variants of Yoshinana and of Han.

If fact, as discussed above, the missing features have been gleaned from appellant's disclosure.

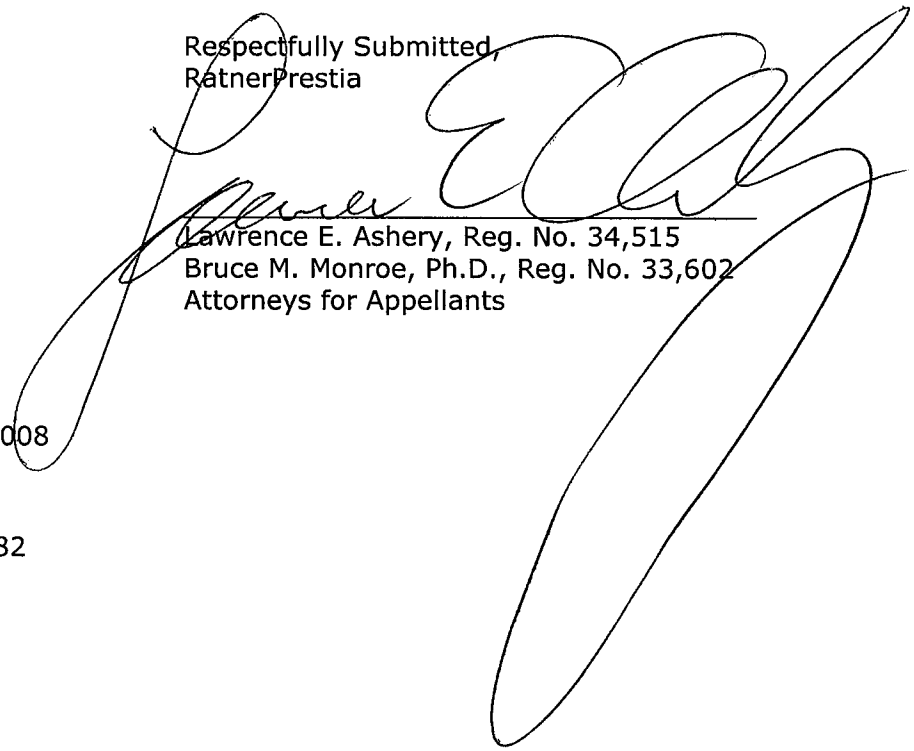
For these reasons, the rejection of a) claims 1-8 as unpatentable over the combination of Yoshinaka and the admitted prior art, and b) claims 1-6 and 8 as unpatentable over the combination of Han and the admitted prior art should be reversed.

D. CONCLUSION

No prior art reference or references applied by the Examiner suggests appellant's

invention. A protrusion, electrically connecting the positive plate and the upper metal current collector is not admitted prior art. The Examiner's assertion that it is an obvious variant of the disclosures of the prior art is a conclusory statement, unsupported by any explicit analysis. For these reasons, the rejection of a) claims 1-8 as unpatentable over the combination of Yoshinaka and the admitted prior art, and b) claims 1-6 and 8 as unpatentable over the combination of Han and the admitted prior art should be reversed, and such action is earnestly solicited.

Respectfully Submitted,
RatnerPrestia



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VIII. APPENDIX OF CLAIMS

1. An alkaline storage battery comprising:

a cylindrical metal case, said cylindrical metal case having a bottom;

a positive plate having a protrusion projecting out of said positive plate;

a negative plate having a further protrusion projecting out of said negative plate;

a separator having insulating properties;

an upper metal current collector for collecting current from a positive electrode side;

a bottom metal current collector for collecting current from a negative electrode side;

an electrolyte; and

a sealing plate made of a metal with a hole formed at the center;

wherein:

an electrode group is formed by spirally winding said positive plate and said negative plate with said separator interposed between them, said protrusion of said positive plate and said protrusion of said negative plate facing mutually opposite directions;

said electrode group is housed in said metal case after joining said protrusion of said negative plate with said bottom metal current collector, and said bottom metal current collector and said bottom of said metal case are joined;

said protrusion of said positive plate is joined with the bottom surface of said upper metal current collector;

a terminal of said upper metal current collector is disposed through said hole in the center of said sealing plate, said upper metal current collector and said sealing plate are joined; and

a periphery of said sealing plate is hermetically sealed with a gasket at an upper opening of said metal case.

2. The alkaline storage battery of claim 1 wherein said positive plate contains a nickel compound, said negative plate contains a hydrogen absorbing alloy, and said electrolyte is an alkaline electrolyte.

3. The alkaline storage battery of claim 1 wherein said upper metal current collector is provided with a gas venting mechanism.

4. The alkaline storage battery of claim 1 wherein a resilient vent member is provided inside said terminal of said upper metal current collector.

5. The alkaline storage battery of claim 3 wherein said gas venting mechanism of said upper metal current collector having said terminal includes incisions made in two to four directions from the periphery toward the center of said upper metal current collector and a resilient vent member located inside said terminal.

6. The alkaline storage battery of claim 1 wherein said sealing plate is annular in shape having said hole in the center with a size at least equal to the size of said terminal of said upper metal current collector, and said terminal of said upper metal current collector passes through said hole to become a terminal for the positive electrode side.

7. The alkaline storage battery of claim 6 wherein asphalt is coated in a gap between said upper metal current collector and said annular sealing plate when joining said upper metal current collector and said sealing plate.

8. The alkaline storage battery of claim 1 wherein the diameter of said metal current collector having said cap-shaped terminal is in the range 1/5 to 4/5 of the outer diameter of said metal case.

9. A method for manufacturing an alkaline storage battery the method comprising the steps of:

forming an electrode group by disposing a positive plate having a protrusion made by projecting out one side edge along the longitudinal direction of said positive electrode and a negative plate having a protrusion made by projecting out one side edge along the longitudinal direction of said negative plate in a manner such that said protrusion of said positive plate and said protrusion of said negative plate face mutually opposite directions, and spirally winding said positive plate and said negative plate with an insulating separator interposed, and fixing said electrode group by winding outer periphery thereof with a tape;

housing said electrode group into a cylindrical metal case one end of which being circular and closed and the other end being open after joining said protrusion of said negative plate and a bottom metal current collector for collecting current for the negative electrode side;

joining said bottom metal current collector joined to said protrusion of said negative plate of said electrode group and the bottom of said metal case;

joining said protrusion of said positive plate of said electrode group and an upper metal current collector having a cap-shaped terminal for collecting current for the positive electrode side; disposing said cap-shaped terminal of said upper metal current collector to which said protrusion of said positive plate has been joined through a sealing plate made of a metal having a hole and joining from above;

pouring a predetermined quantity of an electrolyte from above said electrode group; and hermetically sealing the periphery of said sealing plate made of a metal with a gasket at the upper opening of said metal case.

10. The method for manufacturing an alkaline storage battery of claim 9 wherein,

when joining said bottom metal current collector and the bottom of said metal case, said bottom metal current collector welded to said protrusion of said negative plate and the bottom of said metal case are joined by inserting a welding rod through a hollow space in the center of said electrode group left by removing a mandrel after said electrode group has been wound.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.